

MOLY MASK CONSTRUCTION AND PROCESS

Abstract

Disclosed is a method of manufacturing a metal mask for an integrated circuit chip interconnect solder bump. The invention deposits a very thick photoresist on both sides of a very thick molybdenum foil sheet (the molybdenum sheet is at least 8 mils thick and the photoresist is at least 5 microns thick). Then the process exposes and develops the photoresist to produce at least one opening having a diameter of at least 5 mil. The invention simultaneously etches both sides of the molybdenum foil using a very low etchant spray pressure of approximately 5 psi to form at least one via in the molybdenum foil that has a diameter of at least 12 mil and a knife-edge of 0.2 mil. The photoresist is removed after the etching process.